VA FORM 08-6231

# DESIGN CODES: 1.1 BUILDING CODE: 2012 INTERNATIONAL BUILDING CODE A. NATIONAL LOADING STANDARD: ASCE 7-10 - MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES B. CONCRETE: ACI 318-11 - BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE C. STEEL: AISC 360-10 - SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS

# DESIGN LOADS:

### 1.1 DESIGN LOADS ARE AS FOLLOWS:

- A. ROOF: 1. DEAD LOADS:
- a. EXISTING ROOF: SELF WEIGHT OF EXISTING MATERIAL
- 2. LIVE LOADS: a. 20 PSF WITH LIVE LOAD REDUCTION PER IBC SECTION 1607.11.2
- B. FLOOR AND STAIRS:
- 1. DEAD LOADS: SELF WEIGHT OF MATERIAL
- 2. LIVE LOADS: 100 PSF
- C. EQUIPMENT LOADS:

UNIT IDENTIFIER	MAX DIMENSIONS			MAY WEIGHT (LD)
	L (IN)	W (IN)	H (IN)	MAX WEIGHT (LB)
MAU-1	46	42	79	1,033

- D. RAIN LOADS: 1. N/A: NO ACCUMULATION
- E. HANDRAILS AND GUARDS:
- 1. 50 PLF APPLIED IN ANY DIRECTION AT TOP
- 2. 200 LB CONCENTRATED LOAD APPLIED IN ANY DIRECTION AND AT ANY LOCATION TOP
- 3. 50 LB APPLIED HORIZONTALLY OVER 1 SF TO INTERMEDIATE COMPONENTS
- F. SNOW LOADS: GROUND SNOW LOAD
- a. 15 PSF
- G. WIND LOADS:
- 1. DESIGN WIND SPEED = 90 MPH 2. WIND IMPORTANCE FACTOR = 1.00
- 3. WIND EXPOSURE = C
- H. EARTHQUAKE LOADS:
- 1. OCCUPANCY CATEGORY = II
- 2. SPECTRAL RESPONSE COEFFICIENT
- a. Ss = 0.256 g
- b. S1 = 0.076 9
- 3. SPECTRAL RESPONSE ACCELERATION a. Sds = 0.272 q
- b. Sd1 = 0.122 q
- 4. SEISMIC DESIGN CATEGORY = B5. SITE CLASS = D
- 6. BASIC SEISMIC-FORCE-RESISTING SYSTEM:
- a. STRUCTURAL STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE. 7. RESPONSE MODIFICATION COEFF. R = 3, Cs = .091
- 8. ANALYSIS PROCEDURE EQUIVALENT LATERAL FORCE PROCEDURE
- 1.2 DRIFT CRITERIA: REFER TO TABLE 12.12-1 IN ASCE 7-10 FOR EARTHQUAKE ALLOWABLE STORY DRIFT.
- 1.3 DEFLECTION CRITERIA: REFER TO TABLE 1604.3 FOR DEFLECTION LIMITS.

### GENERAL STRUCTURAL NOTES:

- 1.1 ELEVATIONS AS SHOWN ON THE STRUCTURAL DRAWINGS ARE ELEVATIONS RELATIVE TO THE FINISHED EXISTING FIRST FLOOR ELEVATION = 0'-0"=60.0 FT = 1073.2 FT
- 1.2 WHERE A DETAIL, TYPICAL DETAIL, SECTION, TYPICAL SECTION OR NOTE IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ALL SIMILAR OR LIKE CONDITIONS UNLESS OTHERWISE NOTED.
- 1.3 THE STRUCTURAL DESIGN OF THE STRUCTURE IS BASED ON THE FULL INTERACTION OF ALL ITS COMPONENT PARTS, WITH NO PROVISION MADE FOR CONDITIONS OCCURRING DURING CONSTRUCTION. THEREFORE, CONTRACTOR SHALL PROVIDE ADEQUATE BRACING AND TEMPORARY SHORING DURING CONSTRUCTION.
- 1.4 CONTRACTOR IS RESPONSIBLE FOR ALL JOB SITE SAFETY INCLUDING THE SAFE RIGGING, LIFTING AND SETTING OF EQUIPMENT IN ACCORDANCE WITH APPLICABLE STANDARDS.
- 1.5 FURNISH AND INSTALL ALL NECESSARY ATTACHMENTS, ANCHORAGES AND ACCESSORIES TO PROVIDE A COMPLETE STRUCTURALLY SOUND STRUCTURE WITH A CONTINUOUS LOAD PATH. BRING ANY DISCONTINUITIES TO THE ATTENTION OF THE CONTRACTING OFFICER IMMEDIATELY.
- 1.6 FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF FABRICATION OR CONSTRUCTION. BRING ANY DISCREPANCIES ALONG WITH DETAILED FIELD SKETCHES OF AS-BUILT CONDITIONS TO THE ATTENTION OF THE CONTRACTING OFFICER IMMEDIATELY.
- 1.7 COORDINATE AND VERIFY ALL DIMENSIONS AND DETAILS WITH THE EXISTING, CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS. NOTIFY THE CONTRACTING OFFICER IMMEDIATELY OF ANY DISCREPANCIES.

### SHOP DRAWINGS

- 2.1 STRUCTURAL DRAWINGS INDICATE TYPICAL AND CERTAIN SPECIFIC CONDITIONS ONLY. SHOP DRAWINGS SHALL DETAIL ALL CONDITIONS IN ACCORDANCE WITH SPECIFIED STANDARDS AND THE SPECIFIC REQUIREMENTS OF THIS PROJECT AS INDICATED ON THE DRAWINGS.
- 2.2 CONTRACTOR SHALL PROVIDE A MINIMUM OF ONE HARD COPY AND LEGIBLE PDF FOR EACH STRUCTURAL COMPONENT FOR REVIEW PRIOR TO FABRICATION.
- 2.3 PHOTOCOPY REPRODUCTIONS OF THE CONTRACT DOCUMENTS WILL BE REJECTED AND
- 2.4 SUBMITTALS FOR VENDOR DESIGNED COMPONENTS, INCLUDING BUT NOT LIMITED TO STAIRS, RAILINGS, ATTIC PULL DOWN STAIR AND DOOR SHALL BE ACCOMPANIED BY DRAWINGS AND CALCULATIONS SEALED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT. IN ADDITION, THESE SHOP DRAWINGS AND CALCULATIONS SHALL BE PREPARED UNDER THE DIRECT SUPERVISION OF THE STRUCTURAL ENGINEER SEALING

**CONSULTANTS:** 

INNOVATIVE

ENGINEERING INCORPORATED

### GENERAL STRUCTURAL NOTES: (CTD)

2.5 REVIEW OF SUBMITTALS INCLUDING SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF THOSE SUBMITTALS.

### EXISTING CONDITIONS

- 3.1 AS WITH ANY WORK AFFECTING EXISTING CONSTRUCTION. UNFORESEEN CONDITIONS ARE UNAVOIDABLE WITHOUT DEMOLISHING OTHERWISE SERVICEABLE CONSTRUCTION, DISRUPTING OCCUPIED OPERATIONS AND INCURRING SIGNIFICANT COST FOR CLOSE UP EXAMINATION AND NON-DESTRUCTIVE TESTING DURING THE DESIGN STAGE.
- 3.2 WITH THE PASSAGE OF TIME SINCE THE CREATION OF AS-BUILT DRAWINGS AND/OR THE DESIGNERS SURVEY, BOTH CONCEALED AND VISIBLE CONDITIONS MAY HAVE CHANGED DUE TO ALTERATIONS, ADDITIONS, RENOVATIONS AND DETERIORATION.
- 3.3 PRIOR TO THE COMMENCEMENT OF ANY WORK IN PREPARATION OF CONSTRUCTION RELATED ACTIVITIES, INCLUDING BUT NOT LIMITED TO SHOP DRAWING PREPARATION, ALL EMBEDDED AND CONCEALED ITEMS LIKELY TO BE ENCOUNTERED DURING CONSTRUCTION SHALL BE LOCATED AND MARKED ON THE SURFACE. THIS WORK SHALL BE ACCOMPLISHED BY DESTRUCTIVE AND/OR NON-DESTRUCTIVE MEANS WITHOUT IMPAIRING THE STRUCTURAL INTEGRITY OF THE ASSOCIATED MEMBERS. SHORING AS REQUIRED SHALL BE DESIGNED BY A PROFESSIONAL STRUCTURAL ENGINEER. LICENSED IN THE STATE OF THE PROJECT, AND FURNISHED AND INSTALLED AT NO ADDITIONAL COST.
- 3.4 EXISTING CONDITIONS THAT INTERFERE OR OTHERWISE AFFECT THE DESIGN, CONSTRUCTION OR SERVICEABILITY OF THE WORK SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER, INCLUDING PLAN AND SECTION SKETCHES, IMMEDIATELY FOR RESOLUTION. THE CONTRACTOR SHALL ALLOW TWO CALENDAR WEEKS IN THE SCHEDULE FOR DESIGN RESOLUTION OF THE INTERFERENCE AFTER ALL INFORMATION ABOUT THE INTERFERENCE, INCLUDING SIZE, LOCATION AND FUNCTION OF THE EMBEDMENT, HAS BEEN RECEIVED BY THE STRUCTURAL ENGINEER
- 3.5 BURIED ITEMS OF CONCERN INCLUDE THOSE THAT MAY INTERFERE WITH PROPOSED CONSTRUCTION AND THOSE WITHIN 12 INCHES BELOW A SLAB ON GRADE AND 4 FT BELOW AND WITHIN A TRAPEZOID CREATED BY THE BOTTOM OF THE FOOTING AT THE TOP OF THE TRAPEZOID AND SIDES CREATED BY 1 VERTICAL: 2 HORIZONTAL INFLUENCE LINES EXTENDING DOWN AND OUT FROM THE LOWER EDGES OF THE FOOTING. UNLESS OTHERWISE NOTED, PIPES SHALL NOT BE ALLOWED TO RUN UNDER A FOUNDATION. WHERE SPECIFICALLY ALLOWED AND UNLESS OTHERWISI DETAILED, A PIPE RUNNING BELOW A FOUNDATION SHALL BE SLEEVED WITHIN A GALVANIZED PIPE 3 INCHES LARGER IN DIAMETER WHICH EXTENDS 12 INCHES BEYOND THE INFLUENCE LINES. PIPES EXTENDING THROUGH A FOUNDATION SHALL BE CONTAINED WITHIN A GALVANIZED PIPE SLEEVE 3 INCHES LARGER IN DIAMETER. THE ENDS OF THE PIPE SLEEVES SHALL BE SEALED WITH A EXPANDING COMPRESSIBLE FOAM TO PREVENT THE ENTRY OF SILT INTO THE ANNULAR SPACE.
- 3.6 REFER TO AND FIELD VERIFY ORIGINAL DRAWINGS OF NURSES QUARTERS BLDG. NO 17 DATED JANUARY 17, 1952 PRIOR TO COMMENCING NEW WORK.

### SPECIAL INSPECTIONS:

- 1.1 SPECIAL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH CHAPTER 17 OF THE BUILDING CODE REFERENCED ABOVE AND AS DEFINED BELOW. A QUALIFIED SPECIAL INSPECTOR APPROVED BY THE GOVERNMENT SHALL MAKE SPECIAL INSPECTIONS. THE SPECIAL INSPECTOR SHALL OBSERVE WORK FOR CONFORMANCE WITH THE APPROVED DRAWINGS AND SPECIFICATIONS.
- 1.2 INSPECTION REPORTS SHALL BE FURNISHED TO THE GOVERNMENT, ARCHITECT, AND STRUCTURAL ENGINEER. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR, AND, IF NOT CORRECTED, SHALL BE REPORTED TO THE GOVERNMENT, ARCHITECT, AND STRUCTURAL ENGINEER.
- 1.3 THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT STATING THAT THE STRUCTURAL WORK WAS, TO THE BEST OF HIS KNOWLEDGE, PERFORMED IN ACCORDANCE WITH THE APPROVED DRAWINGS, SPECIFICATIONS, AND THE BUILDING CODE.
- 1.4 THE FOLLOWING TYPES OF WORK REQUIRE SPECIAL INSPECTION: (REFER TO THE BUILDING CODE AND SPECIFICATIONS FOR DETAILED INSPECTION REQUIREMENTS.)
- A. STEEL CONSTRUCTION
- MATERIAL VERIFICATION OF: HIGH-STRENGTH BOLTS, NUTS AND WASHERS
- STRUCTURAL STEEL INSPECTION OF:
- HIGH-STRENGTH BOLTING
- B. CONCRETE CONSTRUCTION
- INSPECTION OF:
- ANCHORS INSTALLED INTO HARDENED CONCRETE C. SOILS
- EXISTING SOIL CONDITIONS
- FILL PLACEMENT
- LOAD BEARING REQUIREMENTS

# **EQUIPMENT NOTES:**

### 1.1 EQUIPMENT COORDINATION

C. THE CONTRACTOR SHALL COORDINATE DIMENSIONAL AND UTILITY REQUIREMENTS OF ACTUAL EQUIPMENT PURCHASED WITH PROVISIONS SHOWN ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ANY CHANGES NECESSARY TO MAKE SUCH COORDINATION WITHOUT ADDITIONAL COST TO THE GOVERNMENT.

### 1.2 EQUIPMENT ANCHORAGE

- A. THE CONTRACTOR SHALL ENGINEER, FURNISH AND INSTALL NECESSARY ANCHORAGE AND VIBRATION ISOLATION FOR ALL EQUIPMENT AND CURBS TO RESIST ALL LOADING INCLUDING BUT NOT LIMITED VIBRATORY, WIND AND EARTHQUAKE LOADS AT NO ADDITIONAL COST TO THE GOVERNMENT.
- B. THE CONTRACTOR SHALL PREPARE AND SUBMIT ANCHORAGE DETAILS AND SUPPORTING CALCULATIONS PREPARED AND SEALED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT FOR ALL MOUNTED EQUIPMENT, AND ASSOCIATED CURBS, FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND INSTALLATION.

3

# EQUIPMENT NOTES: (CTD)

### 1.3 EQUIPMENT STRUCTURAL SUPPORT

A. THE STRUCTURAL DESIGN DEPICTED ON THESE DRAWINGS IS BASED ON THE EQUIPMENT DIMENSIONS AND WEIGHTS OUTLINED ABOVE. IN THE EVENT THE CONTRACTOR SELECTS EQUIPMENT WITH WEIGHT GREATER THAN THAT DEPICTED IN THE TABLE SHOWN ON THIS SHEET, OR DIMENSIONS MORE THAN 10% GREATER THAN THOSE DEPICTED IN THE TABLE SHOWN ON THIS SHEET, THE CONTRACTOR SHALL HAVE THE AFFECTED SUPPORTING STRUCTURE (NEW AND EXISTING) EVALUATED AND REINFORCED AS NECESSARY BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT. AND SUBMIT SEALED CALCULATIONS AND DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF FABRICATION. COSTS ASSOCIATED WITH ENGINEERING ANALYSIS, DESIGN AND CONSTRUCTION OF REPAIRS SHALL BE BORN BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE GOVERNMENT.

### DEMOLITION AND REMOVAL:

### 1.1 GENERAL

A. PERFORM ALL DEMOLITION WORK INCLUDING REMOVAL, TRANSPORT, AND DISPOSAL PER ALL FEDERAL, STATE AND LOCAL RULES AND REGULATIONS.

### 1.2 EXISTING CONDITIONS

- A. BEFORE BEGINNING ANY DEMOLITION WORK. SURVEY THE SITE AND EXAMINE THE DRAWINGS AND SPECIFICATIONS TO DETERMINE THE EXTENT OF THE WORK. PHOTOGRAPH EXISTING CONDITIONS AND RECORD EXISTING ELEVATIONS OF FINISH FLOORS ETC. RECORD LOCATION AND EXTENT OF EXISTING CRACKS AND OTHER DAMAGE. PRIOR TO STARTING WORK SUBMIT EXITING CONDITION PHOTOS AND RECORDS TO THE GOVERNMENT.
- B. SCAN EXISTING CONCRETE FOR EMBEDDED ITEMS UTILIZING RADAR. NOTIFY STRUCTURAL ENGINEER, ARCHITECT, AND GOVERNMENT IMMEDIATELY IN THE EVENT THAT EMBEDDED ITEMS ARE DISCOVERED THAT ARE NOT ON THE STRUCTURAL DRAWINGS. DETERMINE WHAT THE EMBEDDED ITEM IS AND THE PURPOSE IT SERVES. DO NOT PROCEED WITH DEMOLITION OF THE AFFECTED AREA UNTIL AUTHORIZED TO BY THE GOVERNMENT.

### 1.3 DUST. DEBRIS AND NOISE CONTROL

- A. CONFINE NOISE AND DUST TO IMMEDIATE WORK AREA.
- B. CONTRACTOR SHALL REMOVE AND DISPOSE OFF-SITE ALL MATERIALS INDICATED TO BE DEMOLISHED AND REMOVED, RUBBISH AND DEBRIS DAILY INCLUDING DUST AND DIRT.

1.4 TRAFFIC CONTROL A. WHERE PEDESTRIAN AND DRIVER SAFETY IS ENDANGERED IN THE AREA OF THE WORK. USE BARRICADES ANCHORED IN A MANNER TO PREVENT DISPLACEMENT BY

### WIND.

- 1.5 ITEMS TO REMAIN IN PLACE A. TAKE PRECAUTIONS TO AVOID DAMAGE TO EXISTING ITEMS TO REMAIN IN PLACE.
- TO BE REUSED OR TO REMAIN THE PROPERTY OF THE OWNER. B. DO NOT DISTURB EXISTING CONSTRUCTION BEYOND THE EXTENT INDICATED OR NECESSARY FOR INSTALLATION OF THE NEW WORK.
- C. PROTECT NEW WORK FROM DAMAGE AS A RESULT OF SUBSEQUENT WORK.
- D. DO NOT OVERLOAD EXISTING STRUCTURAL ELEMENTS ON WORK TO REMAIN.
- E. INCREASE STRUCTURAL SUPPORT OR ADD NEW SUPPORTS AS MAY BE REQUIRED AS A RESULT OF DEMOLITION WORK INCLUDING BUT NOT LIMITED TO CUTTING, REMOVAL, AND DECONSTRUCTION.
- F. PROVIDE NEW SUPPORTS AND REINFORCEMENT FOR EXISTING CONSTRUCTION WEAKENED BY DEMOLITION, DECONSTRUCTION, OR REMOVAL WORK.
- G. PROVIDE TEMPORARY SHORING AND BRACING FOR SUPPORT OF BUILDING COMPONENTS TO PREVENT SETTLEMENT OR OTHER MOVEMENT.
- H. REPAIR OR REPLACE DAMAGED ITEMS AT NO COST TO THE GOVERNMENT. STRUCTURAL REPAIRS. REINFORCEMENT OR REPLACEMENT REQUIRE AN ENGINEERED PLAN AND CALCULATIONS SEALED BY A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT, AND PAID FOR BY THE

### 1.6 ELEVATED WALLS AND SLABS

- A. PROVIDE NEAT SAWCUTS AT LIMITS OF SLABS TO BE REMOVED. REMOVE CONCRETE EMBEDDED ITEMS AS REQUIRED FOR THE NEW WORK.
- B. HOLES PROPOSED FOR EXISTING SLABS SHALL BE LOCATED WHERE THERE ARE NO IMPACTS TO EXISTING CONCRETE REINFORCEMENTS. CONTRACTOR SHALL LOCATE EXISTING REINFORCEMENTS PRIOR TO COMMENCING CORING OPERATIONS

CONTRACTOR, AND PRIOR APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD.

- C. IF REINFORCEMENTS MUST BE SEVERED DUE TO THE SIZE OF THE OPENING OR ITS REQUIRED LOCATION, CONTRACTOR SHALL PROVIDE EVIDENCE THAT THE MODIFICATION HAS BEEN EVALUATED AND DEEMED ACCEPTABLE BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT.
- D. FOR PLANS THAT INCLUDE RECTANGULAR OPENINGS IN EXISTING SLABS, THE CONTRACTOR SHALL USE CORE HOLES OF SUFFICIENT DIAMETER AT EACH CORNER TO PREVENT OVER CUT UPON INSTALLATION.

### 1.7 UTILITIES AND RELATED EQUIPMENT

A. DO NOT INTERRUPT EXISTING UTILITIES SERVING OCCUPIED OR USED FACILITIES WITHOUT FIRST COORDINATING WITH AND RECEIVING WRITTEN AUTHORIZATION FROM THE GOVERNMENT.

### FOUNDATION NOTES:

- 1.1 ALL FOUNDATIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE REPORT OF SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING EVALUATION FOR VAMC BUILDING 17 RENOVATIONS F&R PROJECT NO.62S0233 LOCATED AT SALEM, VIRGINIA PREPARED BY FROEHLING & ROBERTSON, INC. DATED 18 SEPTEMBER 2014, AND THE REPORT SHALL BE CONSIDERED PART OF THE CONTRACT DOCUMENTS.
- 1.2 THE SAFE BEARING CAPACITY OF THE FOUNDATION SOIL SUPPORTING SPREAD FOOTINGS SHALL BE A MINIMUM OF 1500 PSF AND SHALL BE TESTED AND APPROVED BY A PROFESSIONAL GEOTECHNICAL ENGINEER FOR CONFORMATION OF THIS VALUE PRIOR TO CASTING FOOTING CONCRETE. ALL FOOTINGS SHALL BEAR ON ORIGINAL UNDISTURBED SOIL OR CONTROLLED FILL.

# FOUNDATION NOTES: (CTD)

- 1.3 STRUCTURAL FILL SHALL CONTAIN NO ORGANIC MATERIAL AND BE APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT. STRUCTURAL FILL UNDER SLABS AND WITHIN 10' - 0" OF THE BUILDING FOOTPRINT SHALL BE PLACED IN LIFTS OF THICKNESS DETERMINED BY THE INDEPENDENT TESTING AGENCY AND COMPACTED TO AT LEAST 95% OF ITS STANDARD PROCTOR MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D698. THE TOP 12" OF SUB-BASE UNDER SLABS ON GRADE SHALL BE COMPACTED TO AT LEAST 98% OF ITS STANDARD PROCTOR MAXIMUM DRY DENSITY. AN INDEPENDENT TESTING LABORATORY SHALL OBSERVE ALL BACKFILL, COMPACTION AND PROOF ROLLING OPERATIONS.
- 1.4 FOOTINGS SHALL BE CENTERED ABOUT COLUMN LINES UNLESS NOTED OTHERWISE. 1.5 ALL FOOTINGS AND TURNDOWN SLAB EDGES SHALL PENETRATE TO A MINIMUM DEPTH OF 3'-0" BELOW FINISHED GRADE. ISOLATED FOOTINGS SHALL BE A MINIMUM WIDTH OF 2 FT AND STRIP FOOTINGS SHALL HAVE A MINIMUM WIDTH OF 18 INCHES. IN NO EVENT SHALL FOOTINGS HAVE A WIDTH LESS THAN 12 INCHES.
- 1.6 VENTILATE CRAWL SPACE AS REQUIRED BY LOCAL CODE.

### STRUCTURAL STEEL NOTES:

### 1.1 GENERAL

- A. GENERAL REQUIREMENTS
- 1. DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE MANUAL OF STEEL CONSTRUCTION, BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INC.

### B. SUBMITTALS

1. SHOP DRAWINGS: ERECTION AND FABRICATION DRAWINGS. SHOP DRAWINGS SHALL NOT CONTAIN REPRODUCTIONS OF THE CONTRACT DRAWINGS. MEMBER SUBSTITUTION AND DEVIATIONS FROM THE CONTRACT DRAWINGS SHALL BE CLEARLY IDENTIFIED WITH AN EXPLANATION FOR THE PROPOSED DEVIATION.

### C. DELIVERY, STORAGE AND HANDLING

1. PROTECT FROM CORROSION, DEFORMATION, AND OTHER TYPES OF DAMAGE. STORE ITEMS IN AN ENCLOSED AREA FREE FROM CONTACT WITH SOIL AND WEATHER. REMOVE AND REPLACE DAMAGED ITEMS WITH NEW ITEMS.

### 1.2 PRODUCTS

- A. MATERIALS: 1. ALL WIDE FLANGE W'S & WT'S SHALL BE IN CONFORMANCE WITH ASTM A 992.
- LATEST ADOPTED EDITION, UNO. 2. ALL OTHER SHAPES. PLATES AND BARS SHALL BE IN CONFORMANCE WITH
- ASTM A 36. LATEST ADOPTED EDITION. UNO. 3. ALL SQUARE, RECTANGULAR AND ROUND TUBING SHALL BE IN CONFORMANCE
- WITH ASTM A 500. LATEST ADOPTED EDITION. GRADE B. 4. ALL ROUND PIPE SHALL BE IN CONFORMANCE WITH ASTM A 53. LATEST
- ADOPTED EDITION, GRADE B. 5. BOLTS SHALL CONFORM TO F 1852 (A 325) TYPE 1 LOAD INDICATOR BOLTS,
- 6. THREADED RODS SHALL COMPLY WITH ASTM A 36, LATEST ADOPTED EDITION,
- 7. ANCHOR RODS SHALL COMPLY WITH ASTM F 1554, LATEST ADOPTED EDITION, U.N.O. GRADE 36

9. HEAVY HEX NUTS SHALL COMPLY WITH ASTM A 563.

8. HARDENED STEEL WASHERS SHALL COMPLY WITH ASTM F 436.

- B. FABRICATION 1. ALL NATURAL AND FABRICATED CAMBER SHALL BE INSTALLED UPWARD 2. THE MINIMUM THICKNESS OF GUSSET AND FIN PLATES SHALL BE 3/8 IN.
- 3. BOLTED CONNECTIONS:
- a. ALL OTHERS MAY BE CONSIDERED AS "BEARING" TYPE N.
- b. THE MINIMUM NUMBER OF BOLTS IN STRUCTURAL STEEL CONNECTIONS SHALL BE AS FOLLOWS: 1) A MINIMUM OF TWO BOLTS PER CONNECTION SHALL BE USED, UNO.

### C. FINISH

- 1. SURFACE PREPARATION: a. UNLESS NOTED OTHERWISE, SHOP CLEAN THE SURFACE OF ALL STRUCTURAL
- STEEL IN ACCORDANCE WITH THE REQUIREMENTS OF SSPC-SP2 2. PRIMER:

3. FINISH COATING:

a. UNLESS NOTED OTHERWISE SHOP PAINT WITH A MINIMUM OF 1.0 MILS OF THE FABRICATORS STANDARD RUST INHIBITIVE PRIMER.

a. UNLESS NOTED OTHERWISE, ALL STRUCTURAL STEEL SHALL BE FINISH

### PAINTED IN THE FIELD.

### 1.3 EXECUTION

A. EXAMINATION 1. PRIOR TO STRUCTURAL STEEL ERECTION, ERECTOR SHALL INSPECT EXISTING CONSTRUCTION FOR CORRECT SIZE, LAYOUT AND ALIGNMENT. ANY INCONSISTENCIES DEEMED DETRIMENTAL TO THE ERECTION OF STEEL SHALL BE REPORTED AND

### B. INSTALLATION

1. WELDED CONNECTIONS SHALL BE MADE WITH E70XX ELECTRODES IN ACCORDANCE WITH AWS D1.1, STRUCTURAL WELDING CODE BY THE AMERICAN WELDING SOCIETY, AND SHALL BE PERFORMED BY CERTIFIED WELDERS. WELDER CERTIFICATION SHALL BE AVAILABLE ON SITE FOR INSPECTION.

### C. FIELD QUALITY CONTROL

- 1. TOLERANCES a. MAXIMUM VARIATION FROM PLUMB: 1/4" (6 MM) PER STORY, NON-CUMULATIVE.
- b. MAXIMUM OFFSET FROM TRUE ALIGNMENT

REPAIRED PRIOR TO INSTALLATION.

2. WELDED CONNECTIONS:

Drawing Title:

- a. ALL WELDS SHALL BE VISUALLY EXAMINED. b. 15% OF ALL WELDS SHALL BE TESTED IN ACCORDANCE WITH THE FOLLOWING
- METHODS: 1) TESTED BY THE LIQUID PENETRANT METHOD IN ACCORDANCE WITH ASTM E 165

OR THE MAGNETIC PARTICLE METHOD IN ACCORDANCE WITH ASTM E 709.

### D. REPAIR

1. PROTECTIVE COATINGS DAMAGED DURING THE TRANSPORTATION, ERECTION AND FIELD WELDING PROCESSES SHALL BE REPAIRED IN THE FIELD TO MATCH THE SHOP APPLIED COATING.

STRUCTURAL NOTES

### STRUCTURAL STEEL NOTES: (CTD)

- E. CLEANING AND PROTECTION
  - 1. CLEAN AFTER INSTALLATION EXPOSED PREFINISHED ITEMS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
  - 2. PROTECT INSTALLED ITEMS FROM DAMAGE CAUSED BY SUBSEQUENT CONSTRUCTION.

### REINFORCED CONCRETE NOTES:

- 1.1 CONCRETE DESIGN IS IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 318-08.
- 1.2 CONCRETE WORK SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE FIELD REFERENCE MANUAL: STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE ACI 301 WITH SELECTED ACI AND ASTM REFERENCES (SP-15)
- 1.3 ALL CONCRETE SHALL BE NORMAL WEIGHT (145 PCF) AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH AS FOLLOWS UNLESS NOTED OTHERWISE:
- A. f'c = 3000 PSI FOR FOUNDATIONS AND LOCATIONS NOT OTHERWISE NOTED.
- B. f'c = 3500 PSI FOR EXTERIOR SLABS ON GRADE
- 1.4 CONCRETE SLABS ON GRADE SHALL NOT BE LOADED UNTIL A MINIMUM CONCRETE STRENGTH OF 1800 PSI HAS BEEN ATTAINED AND THE CONCRETE IS AT LEAST THREE DAYS OLD. ALL OTHER CONCRETE MEMBERS SHALL NOT BE LOADED UNTIL THE SPECIFIED CONCRETE DESIGN STRENGTH HAS BEEN ATTAINED
- 1.5 CONCRETE SHALL BE TESTED IN ACCORDANCE WITH ACI 301 AND THE SPECIFICATIONS, WHEN PROVIDED, FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS. AT A MINIMUM, CONCRETE SPECIMENS SHALL BE TAKEN FOR EVERY 100 YARDS OR PORTION THEREOF FOR EACH MIX DESIGN PLACED IN A DAY. CONCRETE TEST REPORTS SHALL BE AVAILABLE ON SITE FOR INSPECTION.
- 1.6 ALL STEEL REINFORCEMENT SHALL CONFORM WITH THE FOLLOWING: A. DEFORMED BARS SHALL CONFORM WITH ASTM A 615 GRADE 60.
- 1.7 PROVIDE CONTINUOUS REINFORCEMENT WHEREVER POSSIBLE. SPLICE ONLY AS SHOWN OR APPROVED. STAGGER SPLICES WHERE POSSIBLE. DOWELS SHALL MATCH SIZE AND SPACING OF THE SPECIFIED REINFORCEMENT AND SHALL BE LAPPED WITH TENSION SPLICES. UNLESS OTHERWISE NOTED, ALL REINFORCING SHALL BE CONTACT LAP SPLICED WITH A CLASS B SPLICE IN ACCORDANCE WITH ACI 318-08. FOR BARS WITH A MINIMUM COVER AND SPACING GREATER THAN 2.0DB AND 3.0DB (DB = BAR DIAMETER) RESPECTIVELY, THE MINIMUM SPLICE LENGTH, EXPRESSED IN BAR DIAMETERS, SHALL NOT BE LESS THAN SPECIFIED IN THE REBAR SPLICE SCHEDULE. SPLICE LENGTHS SHALL BE INCREASED BY A FACTOR OF 1.3 FOR TOP REINFORCEMENT AND WHEN LIGHTWEIGHT CONCRETE IS
- 1.8 ALL DOWELS AND TERMINATING BARS SHALL HAVE A STANDARD 90-DEG HOOK
- 1.9 ALL HORIZONTAL REINFORCING SHALL BE CONTINUOUS AROUND CORNERS UNO.
- A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"
- B. FORMED CONCRETE EXPOSED TO WEATHER OR EARTH:

**RENOVATE BUILDING 17** 

**VA SALEM** 

SALEM, VA

03-18-2015

SLW

1.10 CONCRETE COVER AT REINFORCEMENT:

- 2. (#6 TO #18) 2"
- 1.11 CORNER EDGES OF CONCRETE TO BE LEFT EXPOSED TO VIEW SHALL HAVE A CHAMFER OR RADIUS OR AS INDICATED ON THE DRAWINGS.
- 1.13 ALL CONCRETE SHALL BE CONSOLIDATED BY VIBRATION, SPADING, RODDING OR FORKING SO THAT THE CONCRETE IS THOROUGHLY WORKED AROUND THE REINFORCEMENT, AROUND EMBEDDED ITEMS, AND INTO CORNERS OF FORMS, ELIMINATING ALL AIR OR STONE POCKETS WHICH MAY CAUSE HONEYCOMBING. PITTING, OR PLANES OF WEAKNESS. IF VIBRATORS, OF ADEQUATE SIZE, ARE USED THEY SHALL BE INSERTED AND WITHDRAWN AT POINTS APPROXIMATELY 18 INCHES APART, AT EACH INSERTION, THE DURATION SHALL BE SUFFICIENT TO CONSOLIDATE THE CONCRETE BUT NOT SUFFICIENT TO CAUSE SEGREGATION
- 1.14 MAINTAIN CONCRETE AFTER PLACEMENT WITH MINIMAL MOISTURE LOSS AT RELATIVELY CONSTANT TEMPERATURE FOR THE PERIOD NECESSARY FOR HYDRATION OF CEMENT AND HARDENING OF CONCRETE (NOT LESS THAN 7 DAYS). COMPLY WITH THE REQUIREMENTS OF ACI 308 - STANDARD PRACTICE FOR CURING CONCRETE; AMERICAN CONCRETE INSTITUTE. A COMBINATION CURING AND SEALING COMPOUND SHALL BE APPLIED AFTER THE CONCRETE HAS BEEN FINISHED OR THE FORMS REMOVED. COMPOUND SHALL BE IN ACCORDANCE WITH ASTM C309, LATEST ADOPTED EDITION, TYPE I, CLASS B.

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Department of Veterans Affairs





ARCHITECT:

**590 MEANS ST NW SUITE 200 ATLANTA GA 30319** 404.343.9774

- 1. (#5 AND SMALLER) 1½"
- 1.12 CONCRETE SHALL RECEIVE THE FOLLOWING FINISHES: A. EXTERIOR SLABS - BROOM FINISH IN DIRECTION OF SLOPE.
- (GENERALLY FROM 5 TO 15 SECONDS).

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# one eighth inch = one foot 0 4 8 16 METHERITHERITHERITH

COLD FORMED METAL FRAMING

- 1.1 DESIGN, FABRICATION AND ERECTION OF COLD FORMED METAL FRAMING SHALL BE IN ACCORDANCE WITH THE SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, LATEST EDITION, BY THE AMERICAN IRON AND STEEL INSTITUTE AND AS SUPPLEMENTED BY MANUFACTURERS RECOMMENDATIONS.
- 1.2 UNLESS OTHERWISE NOTED ALL LIGHT GAUGE METAL FRAMING IS TO BE CONTRACTOR DESIGNED BY A STRUCTURAL ENGINEER WITH AT LEAST 5 YEARS EXPERIENCE IN THE DESIGN OF LIGHT GAUGE METAL AND REGISTERED IN THE STATE OF THE PROJECT. SIGNED AND SEALED SUBMITTALS IN THE FORM OF CALCULATIONS, PLANS, ELEVATIONS AND DETAILS SHALL BE PROVIDED AND REVIEWED BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO COMMENCEMENT OF THIS WORK. THE FOLLOWING SHALL BE CONSIDERED MINIMUM DESIGN REQUIREMENTS.
- 1.3 DESIGN SHALL ALSO BE BASED ON THE LOADS INDICATED ABOVE AS WELL AS THE FOLLOWING DEFLECTION CRITERIA:
- A. WALLS 1. EIFS ON GYPSUM OR PLYWOOD SHEATHING: L/240
- 2. BRICK:
- 1.4 ALL FRAMING MEMBERS SHALL BE FORMED CORROSION—RESISTANT STEEL CONFORMING WITH THE REQUIREMENTS OF ASTM A653-94 AND ZINC COATED IN ACCORDANCE WITH ASTM A924.
- 1.5 THE MINIMUM YIELD STRENGTH OF COLD FORMED FRAMING SHALL BE 33KSI FOR COMPONENTS 18 GAUGE AND LIGHTER AND 50KSI FOR COMPONENTS 16 GAUGE AND
- 1.6 ALL FRAMING MEMBERS SHALL COMPLY WITH THE PROFILES (IN ACCORDANCE WITH THE STEEL STUD MANUFACTURERS ASSOCIATION SSMA), GAUGE (18 GAUGE MINIMUM UNO), MAXIMUM SPACING AND MINIMUM BRIDGING REQUIREMENTS AS INDICATED ON THE PLANS (U.N.O.). THE FOLLOWING MINIMUM REQUIREMENTS ALSO APPLY.
- A. LIGHT GAUGE STUDS BACKING UP MASONRY VENEER ANCHORS SHALL BE GALVANIZED AND 18 GAUGE MINIMUM.
- B. EXCEPT FOR TRACK AND WHERE INDICATED, FRAMING MEMBERS SHALL NOT BE SPLICED.
- C. PUNCHED WEB OPENINGS SHALL NOT OCCUR WITHIN 10" OF MEMBER ENDS OR INTERIOR REACTION/SUPPORT POINTS UNLESS A STIFFENER OF THE SAME GAUGE AS THE MEMBER OR HEAVIER IS INSTALLED. D. BRIDGING SHALL CONSIST OF FULL DEPTH SOLID BLOCKING MADE UP OF T OR S
- MEMBERS THE SAME GAUGE AS THE SUPPORTED MEMBER BETWEEN THE OUTER TWO MEMBERS AT EACH END, AT OPENINGS, AND AT 10'-0" MAXIMUM SPACING WITH INTERCONNECTING 1-1/2" X 20 GAUGE STRAPPING ATTACHED TO EACH FLANGE. ATTACH STRAPPING TO EACH FLANGE WITH A MINIMUM OF ONE SCREW AND TO THE SOLID BLOCKING WITH A MINIMUM OF FOUR SCREWS. LATERALLY BRACE THE ENDS OF ALL MEMBERS WITH A CONTINUOUS TRACK OR HEADER. BRIDGING SHALL BE INSTALLED IMMEDIATELY AFTER EACH OF THE FRAMING COMPONENT TYPES HAVE BEEN INSTALLED AND PRIOR TO APPLICATION OF CONSTRUCTION OR BUILDING LOADS.
- 1.7 THE FOLLOWING MINIMUM FRAMING REQUIREMENTS SHALL BE ADHERED TO UNLESS MORE RESTRICTIVE REQUIREMENTS ARE INDICATED.
- A. SLIP TRACK AND/OR SLIDE CLIPS OF THE SAME GAUGE AS THE ATTACHED MEMBER (OR AS REQUIRED) SHALL BE USED FOR NON-LOAD BEARING WALL TO ALLOW FOR BUILDING MOVEMENT WITHOUT THE TRANSFER OF LOAD TO THE WALL MEMBERS.
- 1.8 THE FOLLOWING MINIMUM FASTENING REQUIREMENTS SHALL BE ADHERED TO UNLESS MORE RESTRICTIVE REQUIREMENTS ARE INDICATED.
- A. SCREW FASTENERS SHALL BE #10-16 BY GRABBER WITH A NUMBER 2 POINT OR AS RECOMMENDED BY THE MANUFACTURER. THE MINIMUM SPACING AND EDGE DISTANCE REQUIREMENT SHALL BE 3/4". PROVIDE QUANTITY OF FASTENERS INDICATED ON THE DRAWINGS BUT NO FEWER THAN TWO PER CONNECTION.
- B. WELDING IN LIEU SCREWS MAY BE UTILIZED USING A 3/4 IN. LONG MIN. FILLET WELD, FOR EACH SCREW REPLACED, WITH A THICKNESS EQUAL TO OR GREATER THAN THE THICKNESS OF THE THINNEST SHEET ATTACHED FOR EACH SCREW REPLACED. MATERIAL LIGHTER THAN 18 GAUGE SHALL NOT BE WELDED.
- C. .145 "IN.DIA. POWDER DRIVEN FASTENERS BY HILTI MAY BE USED AT NON-LOAD BEARING WALLS AND WHERE INDICATED TO ATTACH TRACK TO CONCRETE OR STEEL. MAXIMUM SPACING = STUD SPACING OR 24 IN. O/C WHICHEVER IS SMALLER. 1. IN 3000PSI CONCRETE WITH 1-1/8 IN. MIN. EMBEDMENT, MIN. SPACING OF 4 IN.,
- 2. COMPLETE PENETRATION IN STEEL 1/4 IN. TO 3/8 IN. THICK, 18 GA MIN.,
- PRE-ENGINEERED COLD FORMED STEEL TRUSSES

MIN. EDGE DISTANCE OF 3".

MIN SPACING OF 1-1/2 IN., MIN EDGE DISTANCE OF ½ IN.

- 1.1 PRE-ENGINEERED COLD FORMED STEEL TRUSSES SHALL BE DESIGNED BY THE SUPPLIER IN ACCORDANCE WITH THE AISI "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS", LATEST EDITION FOR THE FOLLOWING LOADS. CONNECTIONS BETWEEN TRUSSES AND BETWEEN TRUSSES AND SUPPORTING STRUCTURE SHALL BE DESIGNED AND SPECIFIED BY THE TRUSS ENGINEER. THE ENDS OF STUB TRUSSES AS WELL AS GABLE END TRUSSES SHALL ALSO BE DESIGNED BY THE TRUSS ENGINEER FOR LATERAL WIND LOADING (SEE GENERAL NOTES).
- 1.2 TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING LOAD COMBINATIONS IN ACCORDANCE WITH THE DESIGN LOADS AND CODES AS SPECIFIED IN THE DESIGN CODES AND CRITERIA SECTION OF THESE NOTES. WIND LOADING SHALL BE BASED ON COMPONENT WIND LOADS.

CASE I: DL + CL + LL CASE II: DL + CL + WL

CASE III: DL - WL

THE LOADS REFERENCED TO WITHIN THESE NOTES ARE SERVICE LOADS WITHOUT APPLICATION OF ANY DURATION FACTOR.

CONCENTRATED MECHANICAL/ELECTRICAL LOADS: SEE MECHANICAL

1.3 TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE FOLLOWING DEFLECTION CRITERIA:

ROOF TRUSSES: DL + CL + LL L/240LL L/360

- 1.4 ADDITIONAL RIDGE AND VALLEY MEMBERS SHALL BE FURNISHED TO PROVIDE CONTINUOUS EDGE SUPPORT OF ROOF SHEATHING.
- 1.5 TOP CHORD SHALL BE 16 GAUGE MIN. BOTTOM CHORD SHALL BE 18 GAUGE MIN.

CONSULTANTS:

INNOVATIVE

ENGINEERING INCORPORATED

STEEL ROOF DECKING NOTES

- 1.1 ROOF DECK SHALL BE 1.5B16 DECKING OR AS SPECIFIED ON THE PLANS IN ACCORDANCE WITH THE STEEL DECK INSTITUTE. DECK SHALL HAVE A GALVANIZED FACTORY FINISH. TOUCH UP IN FIELD IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. EXPOSED PRIME PAINTED DECK SHALL BE FIELD PAINTED.
- 1.2 ROOF DECKING SHALL BEAR A MINIMUM OF 1 ½" ON SUPPORTS AND SHALL BE LAPPED A MINIMUM OF 2".
- 1.3 ATTACH METAL DECK TO PURLINS WITH #12 TEK SCREW WITH 36/5 PATTERN AND (2)-#10 TEK SCREW SIDE LAP FASTENERS.

### STEEL FLOOR DECKING NOTES

- 1.1 FLOOR DECK SHALL BE 0.6C22 FORM DECK OR AS SPECIFIED ON THE PLANS IN ACCORDANCE WITH THE STEEL DECK INSTITUTE. (BY VULCRAFT OR OTHER APPROVED MANUFACTURER) FLOOR DECK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A653-94, G60 (Z180).
- 1.2 FLOOR DECKING BEAR A MINIMUM OF 1 ½" ON SUPPORTS AND SHALL BE WELDED TO STEEL FRAMEWORK WITH 5/8" DIAMETER PUDDLE WELDS UTILIZING WELDING WASHERS AT A MAXIMUM SPACING OF 6" O.C. (30/6 PATTERN) AT ENDS OF SHEETS AND A MAXIMUM OF 10" O.C. (30/4 PATTERN) AT INTERMEDIATE SUPPORTS.
- 1.3 PROVIDE ALL ADJUSTING PLATES, CLOSURES, SLAB POUR STOPS, COVER PLATES, COLUMN FLASHING, ACCESS HOLE COVERS AND OTHER ACCESSORIES AS REQUIRED TO ACCOMPLISH THE WORK. ACCESSORIES SHALL BE 20 GAUGE MINIMUM AND SHALL BE OF THE SAME MATERIAL AND FINISH AS THE STEEL DECK UNLESS OTHERWISE INDICATED. ALSO PROVIDE SUPPLEMENTAL MISCELLANEOUS STEEL AS MAY BE REQUIRED TO SUPPORT DECK AT COLUMNS AND OTHER PENETRATIONS.
- 1.4 CONTRACTOR IS RESPONSIBLE FOR PROVIDING ANY SUPPLEMENTAL SHORING THAT MAY BE REQUIRED TO SUPPORT CONSTRUCTION LOADS.
- 1.5 CONCRETE SLAB FILL SHALL BE REINFORCED IN ACCORDANCE WITH SDI RECOMMENDATIONS FOR THE LIVE LOAD INDICATED UNLESS INDICATED OTHERWISE ON THE PLANS. LOCATE REINFORCING MID-HEIGHT BETWEEN TOP OF DECK AND SURFACE OF SLAB.

### DRAWING ABBREVIATIONS

		LLH	LONG LEG HORIZONTAL
BOT	BOTTOM	LLO	LONG LEG OUT
B/STL	BOTTOM OF STEEL	LLV	LONG LEG VERTICAL
C.J.	CONSTRUCTION OR CONTROL JOINT	MAX.	MAXIMUM
CONN	CONNECTION	MIN.	MINIMUM
CONT.	CONTINUOUS	NDS	NATIONAL DESIGN STANDARD
DIAG	DIAGONAL	FWC	FOR WOOD CONSTRUCTION
EA	EACH	NF	NEAR FACE
EF	EACH FACE	NWC	NORMAL WEIGHT CONCRETE
EL	ELEVATION	OC	ON CENTER
EMBED	EMBEDMENT	OFW	OUTSIDE FACE OF WALL
EOD	EDGE OF DECK	PDF	POWDER DRIVEN FASTENER
EOS	EDGE OF SLAB	PJF	PREMOLDED JOINT FILLER
EA	EACH WAY	PLF	POUNDS PER LINEAR FOOT
FF	FAR FACE	REBAR	REINFORCING STEEL
GT	GIRDER TRUSS	STD	STANDARD
HORIZ	HORIZONTAL	SDS	SELF DRILLING SCREW
IFW	INSIDE FACE OF WALL	T&B	TOP AND BOTTOM
JB	JOIST BEARING	T/STL	TOP OF STEEL
JT	JACK TRUSS	TYP	TYPICAL
		UNO	UNLESS NOTED OTHERWISE
		VERT	VERTICAL

# BRICK SHELF ANGLE SCHEDULE

CLEAR SPAN	ANGLE SIZE	MINIMUM BEARING	
UP TO 3'-4"	L4x4x1/4	0'-4"	
3'-5" TO 5'-4"	L4x4x3/8	0'-4"	
5'-5" TO 6'-8"	L6x4x <sup>5</sup> / <sub>16</sub> LLV	0'-4"	
6'-9" TO 8'-0"	L7x4x¾ LLV	0'-4"	
OVER 8'-0"	L5x5x3/8	BOLTED TO HEADER	
NOTE: ASSUMES ARCHING ACTION			

CONCRETE REBAI	? I AP SPI IC	E SCHEDIII E

BAR SIZE	CLASS	NORMAL WEIGHT CONCRETE 28 DAY f'c (PSI)
		3,500
#6 OR SMALLER	В	57 Dia.
#7 OR LARGER	В	71 Dia.

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Orawing Title: 658-13-120 **RENOVATE BUILDING 17** STRUCTURAL NOTES & SCHEDULES **VA SALEM** uilding Number: 590 MEANS ST NW SUITE 200 Approved: Project Director ATLANTA GA 30319 rawing Number: SALEM, VA 2573 404.343.9774 03-18-2015

CONSTRUCTION AND FACILITIES **MANAGEMENT** 

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